

REMARKS

The applicant thanks Examiner Nguyen for the courtesy of a personal interview at the USPTO on July 13, 2004, in which issues in the present application were discussed with the applicant's representative.

I. The Status of All Claims

Claims 1-22 are pending. Claims 1, 2, 6, 11, and 13 are amended. Claims 14-22 are new. Claims 1, 6, and 11-13 are the only independent claims. Claims 2-5 and 18 depend from claim 1, claims 7-10 depend from claim 6, claims 14-17 depend from claim 12, and claims 19-22 depend from claims 1, 6, 11, and 13, respectively.

The specification, at page 3 lines 4-26 and in figures 1 and 2, for example, fully supports the changes to claims 1, 2, 6, 11, and 13, and new claims 14-22. Therefore, the applicant submits that no new matter has been added.

II. The Rejections of Claims 1-2 Under 35 USC 112, Second Paragraph, as Being Indefinite for Failing to Particularly Point Out and Distinctly Claim the Subject Matter for which Applicant Regards as the Invention

The examiner rejects claim 1 under 35 USC 112, second paragraph, stating that:

Claim 1 recites the limitation "the other signal apparatus" in line 4, page 2 of the Amendment. There is insufficient antecedent basis for this limitation in the claim. [Office action page 2 lines 13-14.]

The examiner rejects claim 2 under 35 USC 112, second paragraph, stating that:

Claim 2 recites the limitation "contained in the signalling" in line 15, page 2 of the Amendment. There is insufficient antecedent basis for this limitation in the claim. [Office action page 2 lines 15-16.]

In reply, claims 1 and 2 have been amended to further clarify the claimed invention. The applicant submits that claims 1 and 2, as presently amended, comply with 35 USC 112, second paragraph. Therefore, the applicant respectfully submits that the rejections of claims 1-2 under 35 USC 112, second paragraph, should be withdrawn.

III. The Rejections of Claims 1-3, 5-8, and 10-11 Under 35 USC 102(b) as Being Anticipated by United States Patent 5,521,902 to Ferguson (Hereinafter “Ferguson”)

The examiner rejects claims 1 and 11 as being anticipated by Ferguson, stating that:

As to claims 1 and 11, Ferguson teaches a signalling apparatus for processing signalling messages, comprising:

links via which the signalling apparatus is connected to other signalling apparatus (*a plurality of link sets 18 interconnecting the Service Switching Points “SSPs” 11, Service Point Control “SCP” 13 and Service Transfer Points “STPs” 14 as in Fig. 1*);

at least one signalling system (*signalling point 20 with PC=8*) that sends signalling messages to the other signalling apparatus (*signalling point 20 with PC=9*) or, respectively, receives signalling messages from the other signalling apparatus via said links (*signalling point 20 with PC=8 sends/receives signalling messages to/from signalling point 20 with PC=9 via links 18A, 18B and 18C as in Fig. 2*) (Ferguson, C4; L13-21);

said signalling system that respectively allocates a signalling network identity to said links (*for example, link 18A is uniquely identified or allocated by the triplet “8,9,1”, link 18B as “9,8,2”, etc.*) (Ferguson, Fig. 2 and C4: L22-38);

at least one of said links that is returned in a loop from a signalling point to the signalling point as a loop link (*from signalling point 20 with PC=8 to signalling point 20 with PC=9 and back to signalling point 20 with PC=8 via link 18A, 18B or 18C as in Fig. 2*), different signalling network identities being allocated to the loop link at an output and input side (*any individual link can be uniquely identified by the triplet composed of the point code of the signalling point at one end of the link, the point code of the signalling point at the other end of the link and the link number within the link set joining the signalling points, for example, link 18A can be identified by the triplet “8,9,1” or “9,8,1”*) by the signalling system (Ferguson, C4: L13-38). [Office action page 3 line 12 through page 4 line 14.]

The examiner rejects claim 2 as being anticipated by Ferguson, stating that:

As to claim 2, Ferguson teaches the signalling apparatus of claim 1, wherein said signalling system, with assistance of said loop link communicates signalling messages between two other signalling systems contained in the signalling to which is respectively provided an interface (Ferguson, C2: L44-45). [Office action page 4 lines 15-18.]

The examiner rejects claim 3 as being anticipated by Ferguson, stating that:

As to claim 3, Ferguson teaches the signalling apparatus of claim 1, wherein said signalling system generates internal load for test purposes (*i.e., signalling link test messages are generated for test purposes*) with assistance of said loop link (Ferguson, C5: L4-15). [Office action page 4 lines 19-22.]

The examiner rejects claim 5 as being anticipated by Ferguson, stating that:

As to claim 5, Ferguson teaches the signalling apparatus of claim 1, wherein said signalling system is a signalling system according to No. 7 (*i.e., SS7 network 10 of Fig. 1*) and allocates a same network identifier to said loop link (link 18A of Fig. 2 is uniquely identified by the triplet "8,9,1") at the output and input side (Ferguson, Figs. 1-2). [Office action page 5 lines 3-6.]

The examiner rejects claims 6-8 and 10 as being anticipated by Ferguson, stating that:

Claims 6-8 and 10 are corresponding method claims of apparatus claims 1-3 and 5; therefore, they are rejected under the same rationale. [Office action page 5 lines 7-8.]

In reply, the applicant submits that claims 1, 6, and 11, as amended, recite "...at least one of a network tunnel and a signaling tunnel." Ferguson does not disclose or suggest the recited "...at least one of a network tunnel and a signaling tunnel." Therefore, independent claims 1, 6, and 11, as amended, patentably define over Ferguson. Therefore, the applicant submits that the rejections of independent claims 1, 6, and 11, and of dependent claims 2, 3, 5, 7, 8, and 10, under 35 USC 102(b) as being anticipated by Ferguson should be withdrawn.

IV. The Rejections of Claim 13 Under 35 USC 102(e) as Being Anticipated by United States Patent 6,584,190 to Bressler (Hereinafter “Bressler”)

The examiner rejects claim 13 as being anticipated by Bressler, stating that:

As to claim 13, Bressler teaches a telephony communications system comprising:

allocating unique point codes to each of a plurality of signalling networks interconnecting a plurality of signalling points (*each network node or signalling point, SSP 20, STP 22 or STP 24 of Fig. 2 is assigned a unique point code*); and

routing a signal from a first network of said plurality of signalling networks to a second network of said plurality of signalling networks using said unique point codes (*numeric point codes are carried in control signalling messages exchanged between network nodes to identify the source and destination of each message and based on the point codes, an STP 22 accesses a routing table to select the appropriate signalling path for routing each message*) (Bressler, C5: L45-62). [Office action page 7 lines 13-23.]

In reply, the applicant submits that claim 13, as amended, recites “...at least one of a network tunnel and a signaling tunnel.” Bressler does not disclose or suggest the recited “...at least one of a network tunnel and a signaling tunnel.” Therefore, independent claim 13, as amended, patentably defines over Bressler. Therefore, the applicant submits that the rejection of claims 13 under 35 USC 102(b) as being anticipated by Ferguson should be withdrawn.

V. The Rejections of Claims 4 and 9 Under 35 USC 103(a) as Being Obvious over Ferguson

The examiner rejects claims 4 and 9 as being obvious over Ferguson, stating that:

As to claim 4, Ferguson teaches the signalling apparatus of claim 1, but does not explicitly teach said signalling system realizes an interworking communication with other networks with assistance of a said loop link.

However, as well known in the art that in SS7 networks, Service Switching Points "SSPs" 11 and Service Transfer Parts "STPs" 14 were conventionally employed and allocated in different networks [sic].

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine and modify the teaching of Ferguson to utilize the assistance of a loop link at the SSPs and STPs in different networks to achieve an interworking communication with other networks because such Signal Transfer Points "STPs" (which are multi-port, high-speed packet switches that are programmed to respond to the routing information and route a packet to its destination) were conventionally employed in the art to interconnect between networks via a SS7 data link.

Claim 9 is a corresponding method claim of apparatus claim 4; therefore, it is rejected under the same rationale. [Office action page 5 line 19 through page 6 line 15.]

In reply, the applicant submits that claims 4 and 9 depend from independent claims 1 and 6, respectively. Therefore, claims 4 and 9 patentably define over Ferguson for at least the reasons given above for independent claims 1 and 6. Therefore, the applicant submits that the rejections dependent claims 4 and 9 under 35 USC 103(a) as being obvious over Ferguson should be withdrawn.

V. Independent Claim 12 and New Dependent Claims 14-22

The applicant notes with appreciation that the examiner has allowed claim 12. Office action mailed 21 April 2004 at page 8 item 20.

New claims 14-18 depend from claim 12. Therefore, the applicant submits that new claims 14-18 are also allowable.

New claims 19-22 recite "...at least one of a network tunnel and a signaling tunnel comprises a first internal network comprising a first unique network identity and a first ISUP and a second internal network comprising a second unique network identity and a second ISUP." The applicant submits that the references cited by the examiner, alone or in combination, do not disclose or suggest "...at least one of a network tunnel and a signaling tunnel comprises a first

internal network comprising a first unique network identity and a first ISUP and a second internal network comprising a second unique network identity and a second ISUP," as recited in new claims 19-22. Therefore, the applicant submits that new claims 19-22 patentably define over the asserted references and are also allowable.

New claims 19-22 depend from claims 1, 6, 11, and 13, respectively. Therefore, the applicant submits that claims 19-22 patentably define over the asserted references for at least the reasons given above for claims 1, 6, 11, and 13.

VI. Closure

The applicant respectfully acknowledges the allowance of independent claim 12.

Should the examiner have any questions, he is urged to contact the undersigned at 703-415-0012.

Respectfully Submitted,

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